

DATE: 5/01/2006

INVITATION TO BID
THIS IS NOT AN ORDER

BID NO.: 50-00079332

JEFFERSON PARISH
PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

Page: 1

VENDOR

BUYER: R. Poole

BIDS WILL BE RECEIVED IN THE PURCHASING DEPARTMENT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053 UNTIL 2:00 PM, 5/23/2006 AND PUBLICLY OPENED UPON COMPLETION OF ADMINISTRATIVE TASKS.

LATE BIDS WILL NOT BE ACCEPTED

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES DISQUALIFY BID.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS
THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. THIS BID PACKAGE MUST BE RETURNED IN ITS ENTIRETY.

Questions on this bid are to be faxed to (504) 364-2693 no later than FIVE (5) working days prior to bid opening. Bid numbers should be mentioned in all requests.

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH will accept one bid only from each vendor. Items bid must meet or exceed specifications.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection.

If the bid exceeds \$20,000.00 and the bidder is an agency, corporation, partnership, or other legal entity, the president, vice-president, secretary/treasurer, or an authorized agent, shall sign the proposal, and satisfactory evidence of the authority of the person signing for the agency, corporation, partnership, or other legal entity shall be attached to the proposal.

AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE.

Preference is hereby given to materials, supplies and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA-R.S.38:2251-2261"

USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

PRICES: All prices shall be quoted in the unit of measure specified, and unless otherwise specified, shall be exclusive of State and Parish taxes. As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department.

CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

Visit our website at WWW.JEFFPARISH.NET/BIDS

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

JEFFERSON PARISH requires a firm price. Quoted price will remain firm until _____

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations.

New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A117.1-1961).

RESPONSE TO INVITATION: If your company is unable to bid on this request, please state your reason on bid form, and return to this office before bid opening date. Failure to do so may result in the removal of your company from all future bids.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 95466, dated January 23, 2002. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053.

POSTING OF BIDS: Non-Advertised bids will be posted on bulletin board outside of Suite 4400, Jefferson Parish General Government Building, Gretna, LA, for a period of Five (5) working days after opening date.

Advertised bids will be tabulated and a copy forwarded to each responsive bidder.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE
CORRESPONDING INSTRUCTIONS BELOW.

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1. All bidders are invited to attend the pre-bid conference. Failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. This conference is held to allow questions to be answered and inspect the site with owner's representative, etc. Failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification (with no additional cost to the owner).
2. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project.
3. A Louisiana state contractor's license may be required in accordance with LSA-R.S. 37:2150 et seq.
4. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

5. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.
6. All awards in excess of \$5,000.00 for the construction, alteration, or repair of any public works will be reduced to a formal contract which shall be recorded at the contractor's expense. A price list of recordation costs may be obtained from the Clerk of Court and Ex-officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 reduced to formal contract will require a performance bond.
7. A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. Performance bond shall be supplied at the signing of the contract.
8. Please indicate if you have insurance: YES _____ NO _____
Successful bidder will be required to furnish proof of insurance to this office.
Successful bidder will be required to furnish Federal I.D. Number.
9. Minimum insurance requirements for this bid are as indicated on the attached sheet.
10. Each bid must be accompanied by a cashier's check, certified check, money order, or surety bid bond in the amount of 5% of the bid.
11. Affidavit required to be submitted with bids on all solicitations for construction, alteration or demolition of public building or project. (LSA-R.S. 38:2224)
12. This is a requirements contract to be provided on an as needed basis.
13. Indicate if price will hold firm for _____ year(s) from date of contract or blanket purchase order:
YES _____ NO _____
If price is not firm, escalation must be clearly defined below as to maximum % increase anticipated and if bid is accepted, any increase thereafter must be supported in writing to the JEFFERSON PARISH Purchasing Department.
QUOTED PRICE WILL REMAIN FIRM UNTIL DATE: _____
WITH MAXIMUM ESCALATION PERCENTAGE OF: _____
FROM DATE OF: _____ TO DATE OF: _____
but in no event to exceed the change in the United State Bureau or Labor Statistics Consumer Price Index and/or Wholesale Price Index during the contract period. See LSA-R.S. 38:2212 A (2).
In the event that the successful bidder cannot furnish a specific item or material and labor in the required time, JEFFERSON PARISH may purchase on an emergency basis from the next lowest bidder, or available source, until such time as the successful bidder has notified the PARISH in writing that his stock or labor capability has been replenished. The difference in price will be charged against the successful bidder of this contract, and evidence of purchases and price will be provided.
14. Vendor will be required to submit to the chief buyer of the JEFFERSON PARISH Purchasing Department a quarterly usage report by item of all items listed on this proposal.
15. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be disqualified if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES _____

INDICATE STARTING TIME (IN DAYS) FOR CONSTRUCTION WORK _____

INDICATE COMPLETION TIME (IN DAYS) FOR CONSTRUCTION WORK _____

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) _____

*** ALL BIDDERS MUST COMPLETE SECTION BELOW ***	
FIRM NAME:	
SIGNATURE: (Must be signed here)	TITLE:
PRINT OR TYPE NAME:	
ADDRESS:	
CITY, STATE:	ZIP:
TELEPHONE: ()	FAX: ()
EMAIL ADDRESS:	

TOTAL PRICE OF ALL BID ITEMS: \$ _____

THIS BID MUST BE SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE COMPANY/FIRM FOR BID TO BE VALID. BID PACKAGE, INCLUDING INSTRUCTIONS AND SPECIFICATIONS, MUST BE RETURNED IN ITS ENTIRETY FOR BID TO BE VALID. SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the bid number and bid opening date indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00079332

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
			A QUANTITY OF REFLECTIVE SHEETING FOR THE JEFFERSON PARISH DEPARTMENT OF TRAFFIC ENGINEERING		
1	5	RL	0001 18" X 50 yds. White (4090), (1125 sq. ft. = 5 rls.)		
2	5	RL	0002 24" X 50 yds. White (4090), (1500 sq. ft. = 5 rls.)		
3	5	RL	0003 30" X 50 yds. White (4090), (1875 sq. ft. = 5 rls.)		
4	5	RL	0004 36" X 50 yds. White (4090), (2250 sq. ft. = 5 rls.)		
			Super High Efficiency, Full Cube Prismatic Reflective Sheeting Series #4000 (Diamond Grade - DG3) with Pressure Sensitive Adhesive, or approved equal.		
			All of the above Prismatic Sheeting to meet Specs. No. TE-006-2205 and TE-006A-2005, as revised 4/20/06.		

SPECIFICATION NO. TE-006A – 2005
SPECIFICATION FOR
SUPER-HIGH EFFICIENCY, FULL CUBE REFLECTIVE SHEETING
TRAFFIC ENGINEERING DIVISION

Note: The following specification TE-006A contains warranty clauses directly related to product performance.

1.0 Scope. This specification covers flexible, white and colored, Super-High Efficiency retro-reflective sheeting, tape and related processing materials designed to enhance the day/night visibility of traffic control signs and objects.

2.0 Applicable Documents. The following documents, of the issue in effect on the date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

2.1 ASTM Standards.

2.1.1 D 4956 Standard Specification for Retroreflective Sheeting for Traffic Control

2.1.2 B 209 Specification for Aluminum and Aluminum Alloy Sheet and Plate.

2.1.3 D 523 Standard Method for Test for Specular Gloss.

2.1.4 E 284 Standard Definition of Terms Relating to Appearance of Materials.

2.1.5 E 308 Computing the Colors of Objects by Using the CIE System.

2.1.6 E 810 Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting.

2.1.7 E 1164 Standard Practice for Obtaining Spectrophotometric Data for Object-Color Evaluation.

3.0 Description. The retroreflective sheeting shall have a smooth surface and shall be precoated with a pressure sensitive adhesive backing protected by a removable liner.

4.0 Test Methods.

4.1 Test Conditions. Unless otherwise specified herein, all applied and unapplied test samples and specimens shall be conditioned at the standard conditions of 23 +/- 3 deg. C. (73 +/- 3 deg. F) and 50 +/- 5% relative humidity for 24 hours prior to testing.

4.2 Test Panels. Unless otherwise specified herein, when tests are to be performed using test panels, the specimens of retroreflective material shall be applied to smooth aluminum cut from ASTM B-209 Alloy 5052-H36, 5052-H38, 5154-H38 or 6061-T6 sheets in 0.05 cm. (0.020 in.), 0.10 cm (0.040 in.) or 0.16 cm (0.063 in.) thickness. The aluminum shall be degreased and lightly acid etched before the specimens are applied. The specimens shall be applied to the panels in accordance with the recommendations of the retroreflective sheeting manufacturer.

4.3 Test Deck Performance. The manufacturer supplying materials specified herein must have supplied samples of these materials in each color for mounting on panels of the test deck located at the Jefferson Parish Sign and Signal Shop, 2100 Dickory Avenue. Harahan, LA. These materials must be mounted and exposed to continuous weather conditions for three years prior to bid opening. It is the responsibility of the manufacturer to insure that mounting has been accomplished. Successful performance of the product bid must be demonstrated continuously for a minimum of four years on this deck or actual field performance in Jefferson Parish in order for the product to be qualified as meeting these specifications. In lieu of three or four years test deck exposure, materials (sheeting, process colors, overlay films) shall be approved for use, when, in the opinion of this agency, sufficient evidence and certification from the manufacturer exists to ensure that the materials and services offered can reliably conform to this specification.

Successful performance shall include, but not be limited to continuous adhesion and lamination, shrinkage or distortion, retained color, chromatic quality and reflectivity. Failure to comply with this section of these specifications shall require disqualification and rejection of the manufacturer's product for the bid. See Section 5.8.

5.0 Physical Requirements.

5.1 Color Requirements.

Color shall be as specified and shall conform to the requirements of ASTM D 4956-05, Table 17. Luminance factors shall conform to ASTM D 4956-05, Tables 10 and 14.

5.1.1 Color Test. Conformance to color requirements of Table I shall be determined by instrumental method in accordance with ASTM E 1164 on sheeting applied to aluminum test panels. The values shall be determined on a HunterLab Labscan 6000 0/45 Spectrocolorimeter with option CMR 559 {or approved equal 0/45 (45/0) instrument with circumferential viewing (illumination)}. Computations shall be done in accordance with ASTM E 308 for the 2 degree observer.

5.2 Coefficient of Retroreflection, Ra. The Coefficients of retroreflection shall not be less than the minimum values specified in Table I. Testing shall be in accordance with ASTM E 810.

5.2.1 Units. Coefficients of retroreflection Ra. shall be specified in units of candelas per lux per square meter (candelas per footcandle per square foot).

5.2.2 The observation angles shall be 0.2, 0.5 and 1.0 degrees.

5.2.3 Values at 0 and 90 degrees orientation shall be averaged.

5.2.4 For screen printed transparent colored areas or transparent colored overlay films on white sheeting, the coefficients of retroreflection shall not be less than 70% of the values for corresponding color in Table I.

TABLE I
Minimum Coefficient of Retroreflection Ra
(Candelas per lux per square meter)

White	4	30
0.2	570	215
0.5	400	150
1.0	120	45

Blue	4	30
0.2	26	10
0.5	18	6.8
1.0	5.4	2.0

Yellow	4	30
0.2	425	160
0.5	300	112
1.0	90	34

FYG	4	30
0.2	455	170
0.5	320	120
1.0	96	36

Red	4	30
0.2	114	43
0.5	80	30
1.0	24	9

FY	4	30
0.2	340	130
0.5	240	90
1.0	72	27

Green	4	30
0.2	57	21
0.5	40	15
1.0	12	4.5

FO	4	30
0.2	200	75
0.5	140	52
1.0	42	16

- 5.3 Gloss. The retroreflective sheeting shall have an 85 degree specular gloss of not less than 50 when tested in accordance with ASTM D-523.
- 5.4 Color Processing. The retroreflective sheeting shall permit cutting and color processing with compatible transparent and opaque process colors in accordance with the sheeting manufacturer's recommendations at temperatures of 15 to 38 degrees C (59 to 100 degrees F) and relative humidity's of 20% to 80%. The sheeting shall be heat resistant and permit force curing without staining of applied or unapplied sheeting at temperatures recommended by the sheeting manufacturer.
- 5.5 Adhesive. The protective liner attached to the adhesive shall be removed by peeling without soaking in water or other solutions, without breaking, tearing, or removing any adhesive from the backing. The protective liner shall be easily removed following accelerated storage for 4 hours at 70 degrees C (158 degrees F) under a weight of .175 Kg/sq.cm. (2.5 pounds per square inch). The adhesive backing of the retroreflective sheeting shall produce a bond to support a .80 Kg (1.75 pound) weight for 5 minutes without the bond peeling for a distance of more than 5.0 cm (2.0 inches) when applied to a test panel prepared as in 4.2. Apply 10 cm (4 inches) of a 2.5 cm x 15 cm (1" x 6") specimen to a test panel. Condition and then position the panel face down horizontally, suspend the weight from the free end of the sample and allow it to hang free at an angle of 90 degrees to the panel surface for 5 minutes.
- 5.6 Impact Resistance. The retroreflective sheeting shall comply with the impact resistance requirements contained in ASTM D 4956-05, section 6.10.
- 5.7 Resistance to Accelerated Outdoor Weathering. The retroreflective surface of the sheeting shall be weather resistant and show no appreciable cracking, blistering, crazing, or dimensional change after 2 years unprotected outdoor exposure, facing the equator and inclined 45 degrees from the vertical. Following weather exposure, panels shall be washed in a 1% detergent solution for 45 seconds, rinsed thoroughly with clean water, blotted with a soft clean cloth and brought to equilibrium at standard conditions. After cleaning, the coefficient of retroreflection shall not be less than 80% of the values in Table I and the colors shall conform to the requirements of ASTM D 4956, Table 17. The sample shall:
- 5.7.1 Show no appreciable evidence of cracking, scaling, pitting, blistering, edge lifting or curling or more than 0.8 mm (1/32 inch) shrinkage or expansion.
 - 5.7.2 Be measured only at angles of: 0.2 degree observation, -4 degree entrance, 1.0 degree observation, -4 degree entrance. Where more than one panel of a color is measured, the coefficient of retroreflection shall be the average of all determinations.
- 5.8 Resistance to Heat. The retroreflective sheeting, applied to a test panel and conditioned as in 4.1, shall be measured at 0.2 degree observation and -4 degree entrance angles and exposed to 71 +/- 3 degrees C (160 +/- 5 degrees F) for 24 hours in an air circulating oven. After heat exposure and conditioning

according to provision of Section 4.1, the sheeting shall retain between 85% and 115% of the values measured before exposure.

5.9 General Characteristics and Packaging. The retro-reflective sheeting as supplied shall be of good appearance, free from ragged edges, cracks and extraneous materials, and shall be furnished in either rolls or sheets. When furnished in continuous rolls, the average number of splices shall not be more than 3 per 50 meters (54.7 yd) of material with a maximum of 4 pieces in any 50 meter (45.7 yd) length. Splices shall be butted or overlapped and shall be suitable for continuous application as furnished. When furnished as cut sheets or sign faces, the sheeting shall be packaged flat in accordance with commercially accepted standards. The sheeting shall be packed snugly in corrugated fiberboard cartons, in accordance with commercially accepted standards. Each carton shall clearly stipulate the brand, quantity, size, lot or run number and color. Stored under normal conditions the retroreflective sheeting as furnished shall be suitable for use for a minimum period of one year.

6.0 Performance Requirements and Obligations.

6.1 Certification. The sheeting manufacturer shall, upon request, submit with each lot or shipment, a certification that states that the material supplied will meet all of the requirements listed herein.

6.2 Field Performance Requirements.

6.2.1 Retroreflective sheeting, which is, used for vertically mounted traffic control and guidance signs, which are processed and applied to aluminum sign blank materials in accordance with the sheeting manufacturer's recommendations shall perform effectively for a minimum of 12 years from the date of fabrication (ordinary colors); 7 years (fluorescent yellow and fluorescent yellow-green); and 3 years (fluorescent orange). The retro-reflective sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that: (1) the sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night driving conditions by a driver with normal vision; or (2) the coefficient of retroreflection, after cleaning, is less than the minimums specified for that sheeting during the period listed.

6.2.1.1 Ordinary colors:

80% of the values listed in Table I up to 7 years and
70% of the values listed in Table I up to 12 years

6.2.1.2 Fluorescent colors (fluorescent yellow and yellow-green):

80% of values listed in Table I up to 5 years and
70% of values listed in Table I up to 7 years

6.2.1.3 Fluorescent Orange

50 % of values listed in Table I for 3 years

6.2.2 All measurements shall be made after sign cleaning according to the sheeting manufacturer's recommendations.

- 6.2.3 Natural causes include effects of exposure to weather. Natural causes exclude (without limitation) damage from exposure to chemicals, abrasion and other mechanical damage from fasteners used to mount the sign, collisions or mishandling.

6.3 Sheeting Manufacturer's Replacement Obligation

- 6.3.1 Where it can be shown that the retroreflective sheeting fails to conform to the performance requirements of Section 6.2, the sheeting manufacturer's sole responsibility and purchaser's and user's exclusive remedy shall be:

- 6.3.1.1 Ordinary colors: If the failure occurs within the first 7 years from the date of fabrication, the sheeting manufacturer shall, as its expense, restore the sign surface to its original effectiveness.

Fluorescent colors (fluorescent yellow and fluorescent yellow-green only): If the failure occurs within the first 5 years from the date of fabrication, the sheeting manufacturer shall, as its expense, restore the sign surface to its original effectiveness.

- 6.3.1.2 Ordinary colors: If the failure occurs within the 8th through 12th years from the date of fabrication, the sheeting manufacturer shall furnish the necessary amount of sheeting to restore the sign surface to its original effectiveness.

Fluorescent colors (fluorescent yellow and fluorescent yellow-green only): If the failure occurs within the 6th or 7th year from the date of fabrication, the sheeting manufacturer shall furnish the necessary amount of sheeting to restore the sign surface to its original effectiveness.

Fluorescent Orange: If the failure occurs within 3 years from date of fabrication, the sheeting manufacturer shall furnish the necessary amount of sheeting necessary to restore the sign surface to its original effectiveness.

- 6.3.1.3 Replacement sheeting shall carry the unexpired warranty of the sheeting it replaces.

- 6.4 Process Inks. The manufacturer of the sheeting shall manufacture and may offer at no additional or a nominal cost process inks, clears and thinners recommended for the sheeting to meet the performance requirements of this specification, and shall further be responsible for technical assistance in the use of these inks in accordance with section 7.

- 6.5 Slip Sheet. Slip Sheet paper, if recommended by the sheeting manufacturer for sheeting surface protection or for use in packing, storage or shipping finished signs, may furnish in rolls by the manufacturer at no additional charge or nominal charge in at least equal square footage and in the same widths as the sheeting supplied.

6.6 Washers. Washers, if recommended by the sheeting manufacturer to protect the sign surface from damage by bolts or other fasteners, may be furnished by the manufacturer at no additional charge or a nominal charge.

7.0 Technical Assistance Requirements.

7.1 Instruction and Training. The manufacturer supplying the sheeting requirements shall provide the services of a qualified technician for instruction and training at the primary sign manufacturing facility designated by the agency. This instruction shall be available on a quarterly basis at no additional cost, and shall include but not be limited to, training films, material application, equipment operation, silk screening techniques, packaging, storage and other proven sign shop practices as they apply to the reflective sheeting supplied by the manufacturer, and to assure that the resulting signs can comply with the applicable specifications.

7.2 Equipment. The manufacturer supplying the retro-reflective sheeting requirements shall provide service for sheeting application equipment of their manufacture, certify that trained personnel will be available on 72 hours notice to render such service, and shall stock authorized parts for their sheeting application equipment. "Service" is understood to mean the capability of calibration and trouble shooting, as well as the training and retraining of personnel as required.

SPECIFICATION NO. TE-006 – 2005
SPECIFICATION FOR
SUPER-HIGH EFFICIENCY, FULL CUBE REFLECTIVE SHEETING
(DIAMOND GRADE) FOR TRAFFIC SIGNS
TRAFFIC ENGINEERING DIVISION

Note: The following Specification (TE 006) contains both warranty and pre-Qualification clauses directly related to product performance. See Sections 4, 6, and 9.

1.0 Scope. This specification covers flexible, white or colored, Super-High Efficiency retro-reflective sheeting, tape and related processing materials designed to enhance the day/night visibility of traffic control signs and objects.

2.0 Applicable Documents. The following documents, of the issue in effect on the date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

2.1 ASTM Standards.

1.2.1. ASTM D 4956 Standard Specification for Retro-reflective Sheeting for Traffic Control

2.1.2. D 523 Standard Method for Test for Specular Gloss.

2.1.3. E 284 Standard Definition of Terms Relating to Appearance of Materials.

2.1.4. E 308 Computing the Colors of Objects by Using the CIE System.

2.1.5. E 810 Standard Test Method for Coefficient of Retroreflection of retroreflective Sheeting.

2.1.6. E 1164 Standard Practice for Obtaining Spectrophotometric Data for Object-Color Evaluation.

2.1.1. B209 Specification for Aluminum and Aluminum Alloy Sheet and Plate.

3.0 Description. The retroreflective sheeting shall have a smooth surface and shall be pre-coated with a pressure sensitive adhesive backing protected by a removable liner.

4.0 Test Methods.

4.1 Test Conditions. Unless otherwise specified herein, all applied and unapplied test samples and specimens shall be conditioned at the standard conditions of 73 +/- 3 degrees F (23 +/- 3 degrees C) and 50 +/- 5% humidity for 24 hours prior to testing.

4.2 Test Panels. Unless otherwise specified herein, when tests are to be performed using test panels, the specimens of retroreflective material shall be applied to smooth aluminum cut from ASTM B-209 Alloy 5052-H36, 5052-H38, 5154-H38 or 6061-T6 sheets in 0.020 inch (0.051 cm), 0.040 (0.102 cm) or 0.063 (0.160 cm) thickness. The aluminum shall be degreased and lightly acid etched before the specimens are applied. The specimens shall be applied to the panels in accordance with the recommendations of the retroreflective sheeting manufacturer.

4.3 Test Deck Performance. The manufacturer supplying materials specified herein must have supplied samples of these materials in each color for mounting on panels of the test deck located at the Jefferson Parish Sign and Signal Shop, 2100 Dickory Avenue. Harahan, LA. These materials must be mounted and exposed to continuous weather conditions for three years prior to bid opening. It is the responsibility of the manufacturer to insure that mounting has been accomplished. Successful performance of the product bid must be demonstrated continuously for a minimum of four years on this deck or actual field performance in Jefferson Parish in order for the product to be qualified as meeting these specifications. In lieu of three or four years test deck exposure, materials (sheeting, process colors, overlay films) shall be approved for use, when, in the opinion of this agency, sufficient evidence and certification from the manufacturer exists to ensure that the materials and services offered can reliably conform to this specification.

Successful performance shall include, but not be limited to continuous adhesion and lamination, shrinkage or distortion, retained color, chromatic quality and reflectivity. Failure to comply with this section of these specifications shall require disqualification and rejection of the manufacturer's product for the bid. See Section 5.8.

5.0. Physical Requirements

5.1 Color Requirements

Color shall be as specified and shall conform to the requirements of ASTM D 4956-05, Table 17. Luminance factors shall conform to ASTM D 4956-05, Tables 10 and 14.

5.2 Coefficient of Retroreflection, RA. The coefficients of Retroreflection shall not be less than the minimum values specified in Table I. Three 8 in x 8 in samples spaced evenly across and down a representative piece of sheeting shall be taken. The coefficient of retroreflection shall be determined for each of the three samples per ASTM E810. The average of the three values shall comply with the stated minimum table value and no single sample shall be less than 80% of the table value.

5.2.1. Units. Coefficients of retroreflection RA shall be specified in units of candelas per footcandle per square foot (candelas per lux per square meter).

5.2.2. The observation angles shall be 0.2, 0.5 and 1.0 degrees.

Values at 0 and 90 degrees orientation shall be averaged.

For screen printed transparent colored areas or transparent colored overlay films on white sheeting, the coefficients of retroreflection shall not be less than 70% of the values for corresponding color in Table I.

TABLE I

Minimum Coefficient of Retroreflection R_A
(Candelas per lux per square meter)

Table I
Minimum Coefficient of Retroreflection
(cd/lux/m²)

White	4	30
0.2	570	215
0.5	400	150
1.0	120	45

Blue	4	30
0.2	26	10
0.5	18	6.8
1.0	5.4	2.0

Yellow	4	30
0.2	425	160
0.5	300	112
1.0	90	34

FYG	4	30
0.2	455	170
0.5	320	120
1.0	96	36

Red	4	30
0.2	114	43
0.5	80	30
1.0	24	9

FY	4	30
0.2	340	130
0.5	240	90
1.0	72	27

Green	4	30
0.2	57	21
0.5	40	15
1.0	12	4.5

FO	4	30
0.2	200	75
0.5	140	52
1.0	42	16

- 5.3. Gloss Retention. The retroreflective sheeting shall have an 85 degree specular gloss of not less than 50 when tested in accordance with ASTM D-523.

- 5.4. **Color Processing.** The retroreflective sheeting shall permit cutting and color processing with compatible transparent and opaque process colors in accordance with the sheeting manufacturer's recommendations at temperatures of 60 to 100 degrees F (16 to 38 degrees C) and relative humidity's of 20% to 80%. The sheeting shall be heat resistant and permit force curing without staining of applied or unapplied sheeting at temperatures recommended by the sheeting manufacturer.
- 5.5. **Adhesive.** The protective liner attached to the adhesive shall be removed by peeling without soaking in water or other solutions, without breaking, tearing, or removing any adhesive from the backing. The protective liner shall be easily removed following accelerated storage for 4 hours at 160 degrees F (71 degrees C) under a weight of 2.5 pounds per square inch (0.176 Kg/cm²). The adhesive backing of the retroreflective sheeting shall produce a bond to support a 1.75 pound (0.79 Kg) weight for 5 minutes without the bond peeling for a distance of more than 2 inches (5.08 cm) when applied to a test panel prepared as in 4.2. Apply 4 inches (10.26 cm) of 1" x 6" (2.54 cm x 15.2 cm) specimen to a test panel. Condition and then position the panel face down horizontally, suspend the weight from the free end of the sample and allow it to hang free at an angle of 90 degrees to the panel surface for 5 minutes.
- 5.6. **Impact Resistance.** The retroreflective sheeting shall comply with the impact resistance requirements contained in ASTM D 4956-05, section 6.10.
- 5.7. **Resistance to Accelerated Outdoor Weathering.** The Retro-reflective surface of the sheeting shall be weather resistant and show no appreciable cracking, blistering, crazing, or dimensional change after 3 years unprotected outdoor exposure, facing the equator and inclined 45 degrees from the vertical. Following weather exposure, panels shall be washed in a 1% mild detergent solution for 45 seconds, rinsed thoroughly with clean water, blotted with a soft clean cloth and brought to equilibrium at standard conditions. After cleaning, the coefficient of retroreflection shall not be less than 80% of the values in Table I and the colors shall conform to the requirements of ASTM D 4956, table 17. The sample shall:

5.7.1. Show no appreciable evidence of cracking, scaling, pitting, blistering, edge lifting or curling or more than 1/32 inch (0.08 cm) shrinkage or expansion.

5.7.2. Be measured only at angles of 0.2 degrees observation and -4 degree entrance. Where more than one panel of a color is measured, the coefficient of retroreflection shall be the average of all determinations.

5.8 Resistance to Heat. The retroreflective sheeting, applied to a test panel and conditioned as in 4.1, shall be measured at 0.2 degree observations and -4 degree entrance angles and exposed to 160 +/- 5 degrees F (71 +/- 3 degrees C) for 24 hours in an air circulating oven. After heat exposure and conditioning according to provision of Section 4.1. The coefficients of retroreflection measured after exposure shall be between 85% and 115% of the values measured before exposure.

5.9. General Characteristics and Packaging. The retroreflective sheeting as supplied shall be of good appearance, free from ragged edges, cracks and extraneous materials, and shall be furnished in either rolls or sheets. When furnished in continuous rolls, the average number of splices shall not be more than 3 per 50 yards (45.7 m) of material with a maximum of 4 pieces in any 50 yard (45.7 m) length. Splices shall be butted or overlapped and shall be suitable for continuous application as furnished. When furnished as cut sheets or sign faces, the sheeting shall be packaged flat in accordance with commercially accepted standards. The sheeting shall be packed snugly in corrugated fiberboard cartons, in accordance with commercially accepted standards. Each carton shall clearly stipulate the brand, quantity, size, lot or run number and color. Stored under normal conditions the retroreflective sheeting as furnished shall be suitable for use for a minimum period of one year. Rolls and sheets are determined by requisition.

6.0 Performance Requirements and Obligations.

6.1. Certification. The sheeting manufacturer shall, upon request, submit With each lot or shipment, a certification which states that the material supplied will meet all of the requirements listed herein.

6.2. Field Performance Requirements.

6.2.1 For Permanent Signing – Warranty Ordinary Colors:

Sheeting manufactured of standard colors and processed and applied to sign blank materials in accordance with sheeting manufacturer's recommendations, shall perform effectively for at least 12 years. The retroreflective sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that: (1) the sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night driving conditions; or (2) the coefficient of retroreflection is less than the minimum specified for that sheeting during that period listed.

80% of values listed in Table I up to 7 years and
70% of values listed in Table I up to 12 years

Failure of process colors or overlay films provided and/or sold for use on recommended sheeting shall constitute a failure of entire sign and shall be replaced under manufacturer's replacement obligations.

For screen printed transparent colored areas or transparent colored overlay films on white sheeting, the coefficients of retroreflection shall not be less than 70% of the values for the corresponding integral color.

All measurements shall be made after sign cleaning according to sheeting manufacturer's recommendations.

6.2.2 For Permanent Signing – Warranty Fluorescent Colors:

Sheeting manufactured of fluorescent colors and processed and applied to sign blank materials in accordance with sheeting manufacturer's recommendations shall perform effectively for the number of years stated in this specification. The retroreflective sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that: (1) the sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night driving conditions; or (2) the coefficient of retroreflection is less than the minimum specified for that sheeting during that period listed.

80% of values listed in Table I up to 5 years and
70% of values listed in Table I up to 7 years

Failure of process colors or overlay films provided and/or sold for use on recommended sheeting shall constitute a failure of entire sign and shall be replaced under manufacturer's replacement obligations.

All measurements shall be made after sign cleaning according to sheeting manufacturer's recommendations.

6.2.3 For Temporary Signing – Warranty Fluorescent Orange Colors

Sheeting manufactured of fluorescent orange and applied to sign blank material in accordance with the sheeting manufacturer's recommendations, is expected to perform effectively for a minimum of three years. The retroreflective sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that: (1) the sign is ineffective for its intended purpose or (2) retains less than 50% of the coefficient of retroreflection values listed in Table I at 0.2 degrees observation, -4 degrees entrance (measured in accordance with ASTM E810).

All measurements shall be made after sign cleaning according to the sheeting manufacturer's recommendations.

Natural causes include effects of exposure to weather. Natural causes exclude (without limitation) damage from exposure to chemicals, abrasion and other mechanical damage (such as from fasteners used to mount the sign, collisions or mishandling), vandalism, or malicious mischief.

7.0 Sheeting Manufacturer's Replacement Obligation

7.1 For standard colors where it can be shown that retroreflective signs, supplied and used according to the sheeting manufacturer's recommendations, have not met the performance requirements, the sheeting manufacturer shall cover restoration costs as follows for sheetings shown to be unsatisfactory during:

- 7.1.1 For the entire 12 years, the sheeting manufacturer will replace the sheeting required to restore the sign surface to its original effectiveness.
 - 7.1.2 In addition, during the first seven years the sheeting manufacturer will cover the cost of restoration of the sign surface to its original effectiveness at no cost to agency for materials and labor.
 - 7.1.3 Replacement sheeting shall carry the unexpired warranty of the sheeting it replaces.
- 7.2 For fluorescent colors where it can be shown that retroreflective signs, supplied and used according to the sheeting manufacturer's recommendations, have not met the performance requirements, the sheeting manufacturer shall cover restoration costs as follows for sheetings shown to be unsatisfactory:
 - 7.2.1. If the failure occurs within the first 5 years from the date of fabrication, the manufacturer will, at its expense, restore the sign surface to its original effectiveness.
 - 7.2.2. If the failure occurs with the 6th or 7th year from the date of fabrication, the manufacturer will furnish the necessary amount of sheeting necessary to restore the sign surface to its original effectiveness.
 - 7.2.3. Replacement sheeting shall carry the unexpired warranty of the sheeting it replaces.
- 7.3 For temporary signing, fluorescent orange, where it can be shown that the retroreflective sheeting fails to conform to the performance requirements, the sheeting manufacturer's sole responsibility and purchaser's and user's exclusive remedy shall be:
 - 7.3.1. Provide replacement sheeting. This sheeting shall carry the unexpired warranty of the sheeting it replaces.
- 7.4 Process Inks. The manufacturer of the sheeting shall manufacture and may offer at no additional cost or a nominal cost, the process inks, clears and thinners recommended for the sheeting to meet the performance requirements of this specification, and shall further be responsible for technical assistance in the use of these inks in accordance with Section 8.

- 7.5 Slip Sheet. Slip Sheet paper, if recommended by the sheeting manufacturer for sheeting surface protection or for use in packing, storage or shipping finished signs, may furnish in rolls by the manufacturer at no additional charge or nominal charge in at least equal square footage and in the same widths as the sheeting supplied.
- 7.6 Washers. Washers, if recommended by the sheeting manufacturer to protect the sign surface from damage by bolts or other fasteners, may be furnished by the manufacturer at no additional charge or a nominal charge.
- 8.0 Technical Assistance Requirements.
 - 8.1 Instruction and Training.
 - 8.1.1. The manufacturer supplying the sheeting requirements shall provide the services of a qualified technician for instruction and training at the primary sign manufacturing facility designated by the agency. This instruction shall be available on a quarterly basis at no additional cost, and shall include but not be limited to, training films, material application, equipment operation, silk screening techniques, packaging, storage and other proven sign shop practices as they apply to the reflective sheeting supplied by the manufacturer, and to assure that the resulting signs can comply with the applicable specifications.
 - 8.1.2. Additional on-site technical assistance by the manufacturer supplying the retroreflective sheeting shall be provided at each of the sign shops designated in the bid invitation. This assistance will be provided at least once during each quarter of sign production, if required.
 - 8.2 Compliance. Failure to comply with the requirements and schedules of 7.1 and 7.2 shall be cause for cancellation of annual contract if applicable.
- 9.0 Jefferson Parish requires sign dating of all signs at the time of application. That date constitutes the start of field performance obligation period.
- 10.0 Patented Devices, Materials and Processes. Seller will pay any damages, costs or fines resulting from any claims against Jefferson Parish for infringement or alleged infringement of third party patents by product

supplied by Seller under this specification. The costs paid by Seller shall include legal and court costs deemed reasonably necessary by counsel for Jefferson Parish in defending against such claims.

Wd:te-006 revised

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF

INCORPORATED.

AT THE MEETING OF DIRECTORS OF _____
INCORPORATED, DULY NOTICED AND HELD ON _____,
A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT
WAS:

RESOLVED. THAT _____, BE AND IS HEREBY
APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-
FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON
BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS
AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES,
DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE
EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES,
CONTRACTS AND ACTS AND TO RECEIVE AND RECEIPT THEREFOR - ALL
PURCHASE ORDERS AND NOTICES ISSUED PURSUANT TO THE PROVISIONS OF
ANY SUCH BID OR CONTRACT, THIS CORPORATION HEREBY RATIFYING,
APPROVING, CONFIRMING, AND ACCEPTING EACH AND EVERY SUCH ACT
PERFORMED BY SAID AGENT AND ATTORNEY-IN-FACT.

I HEREBY CERTIFY THE FOREGOING TO BE
A TRUE AND CORRECT COPY OF AN
EXCERPT OF THE MINUTES OF THE
ABOVE DATED MEETING OF THE BOARD
OF DIRECTORS OF SAID CORPORATION,
AND THE SAME HAS NOT BEEN
REVOKED OR RESCINDED.

SECRETARY-TREASURER

DATE